FOSTER D. SNELL, INC.
29 WEST 15TH STREET, NEW YORK 11, N. Y.
CONSULTING CHEMISTS
ENGINEERS

January 28, 1964

Report to : Philip Morris, Inc.

Sample of : Cigarettes

Submitted by : Mr. Frank E. Resnik, Manager, Analytical Services Division

Sample Number 1388 - 32, 33, 34, 35

Marking See below

Sampled by : Client

Sample No.	1388-32	1388-33	1388-34	1388-35
Identification Code	MR4-X4AP	Y4-A3AN	PR4-X4AQ	PR4-I4A
	T A R (milligrams in smoke of 1 cigarette)			
Run 1	18.2	13.4	12.2	9.5
Run 2	18.3	13.8	11.6	9.9
Run 3	18.3	13.6	13.1	10.6
Average	18.3	13.6	12.3	10.0
	13.2	10.2	9.5	11.6
	24.2	18.4	20.6	22.8

DISCUSSION:

The cigarettes were conditioned at 77°F. (25°C.) and 50 per cent relative humidity before smoking. They were smoked to a butt length of 25 millimeters. Five cigarettes were smoked for each single determination. Determinations for tar were carried out in triplicate.

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10M-1-62-B

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DISCUSSION: (Cont'd.)

Smoking was performed in a four-place solenoid-actuated mechanical smoking machine. Puffs of 35 milliliter volume and 2 seconds duration were taken at 1 minute intervals until the cigarettes were burned to the predetermined butt length. The smoke passed through an absorption train consisting of a Kjeldahl flask containing 1 ml. of 0.5 N hydrochloric acid and 10 ml. of alcohol and then through 2 bubble traps. The first bubbler contained 5 ml. of 0.5 N alcoholic hydrochloric acid. The second bubbler contained 5 ml. of 0.5 N aqueous hydrochloric acid.

At the conclusion of the run the smoke was allowed to settle for 20 minutes. All portions of the smoke collection train were washed into the flask with a minimum of hot water and alcohol. The tar was determined by transferral of the flask contents to a beaker for evaporation of the solvent on a steam bath. The beaker was then placed in a convection type oven where it was exposed to a temperature of 105°C. for 7 hours. It was then removed, placed in a desiccator where it was allowed to cool, and weighed.

Respectfully submitted,

FOSTER D. SNELL, INC.

J. Mitchell Fain

J. Mitchell Fain, Ph.D.
Director, Special Products Dept.

AR/JMF:hn
2c, 3p, f.

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